Entry and Exit in Geographic Markets

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The relationship between the size of a market and the competitiveness of the market has been of long-standing interest to IO economists. Empirical studies have used the relationship between the size of a geographic market, measured as market population, and both the number of firms in the market and the average sales of the firms to indirectly draw inferences about the degree of competition in the market. A second line of inquiry has relied on dynamic models that make predictions about how the impediments to new firm entry, such as the magnitude of sunk entry costs, affect the patterns of firm turnover in order to infer the extent of competitive pressure from potential entrants. In this paper we estimate a structural model of firm entry and exit developed by Pakes, Ostrovsky, and Berry (2004) that can sort out three separate components of the competitive process. Using the model we can identify the effect of an increase in the number of firms on the average profits of firms in a market, and the magnitudes of entry costs and firm scrap values that are key determinants of the degree of firm turnover.

We use the empirical model to analyze the entry and exit patterns of establishments in two medical-related service industries, dentists and chiropractors. Using micro data collected as part of the Census of Service Industries, we measure the number of establishments and the flows of entering and exiting establishments for 754 small geographic markets in the U.S. at five-year intervals over the 1977-2002 period. In addition to measuring the entry and exit flows, we are able to measure the average revenue and average profits of establishments in each geographic market and year. We use this data to estimate a three equation model that describes establishment profits, the rate of entry, and the rate of exit across the geographic markets and time periods.

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